

government has asked for the views of a committee set up primarily to consider what should be done about Medicaid.

Controversial Matters

The two main federal policy-makers, Dr. Egeberg and his chief, Mr. Finch, the Secretary of Health, Education, and Welfare, are concentrating on matters which are much more likely to raise the hackles of doctors and hospitals: the training of many more doctors, the shortening of medical training, the much wider use of medical auxiliaries (partly by recruiting medical corpsmen returning from Vietnam), the direction of doctors to parts of the country—the South and Mid-west—which are less attractive to physicians than the affluent east and west coasts. They are also stressing greater reliance on the general practitioner and less on the hospitals, and underlining the need for more and better outpatient clinics and neighbourhood health centres, as well as for more group practice, particularly in the centres of cities where the poor

abound. Some form of prepayment of doctors' bills—the *bête noire* of the A.M.A.—is also mentioned. Too often, Dr. Egeberg and Mr. Finch said in their report on the crisis in health, "the private sector has been unwilling to give up practices that are unsuited to the incredibly rapid changes of our society, new demands, and changed demands." It is not only the doctors whom they are addressing but the private health insurers, the hospitals, and the nursing-homes.

None of the ideas put forward are new, but many of them are anathema to the medical profession, no matter how often Mr. Finch and Dr. Egeberg repeat that they are anxious to preserve the pluralistic and voluntary nature of health care in the United States. If the Republicans are really serious about tackling the crisis they may find themselves engaged in a tussle with the A.M.A. similar to, but perhaps even more ferocious than, that which the Democrats had with it over the introduction of Medicare. Dr. Cavanaugh, Dr. Egeberg's deputy, said recently, "We will have to shake the present system literally to its foundations." The question is whether President Nixon, who allowed the A.M.A. to veto Mr. Finch's choice as the country's chief medical official, will allow this to happen.

CONTEMPORARY THEMES

Research in the Field of Psychiatry*

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The foundations of clinical psychiatry as we know it today were laid principally by European clinicians, men whose training and professional activities were focused on diagnosis and treatment. The energy, purpose, and skill which these pioneers brought to their refractory material resulted in the descriptive mapping of the major forms of mental disorder which necessitate institutional care. Their impressive achievement can be attributed to the notion of the clinician functioning as his own research instrument, which led to an insistence on careful clinical observation as the bedrock of the discipline. It also led, however, to the propounding of ambitious claims on behalf of the clinical method, of which the following—advanced by an eminent clinician at the First International Congress of Psychiatry in 1950—is an example: "...clinical psychiatry is the firm centre of scientific psychiatry. . . . Today in my opinion the signature of clinical psychiatry is, that all the currents which made their appearance separately in the history of the ages, either paying attention exclusively to the physical or exclusively to the somatic aspect, or solely to philosophical penetration, or, above all, to pure empiricism, or understanding while ignoring ethics, or understanding only from deviations from ethics, are now led by the clinician into one channel in one great theory, encompassing them all" (Rümke, 1950).

With hindsight we must, in my view, take a much less inflated view of the clinical psychiatrist's function in research. In this regard it is instructive to recall that in the field of internal medicine the growth of clinical science in the past two generations has so eroded the former authority of the clinician as to have stimulated a recent, spirited defence of clinical judgement—with one basic proviso: "The clinician can organize, classify, process and analyse his data with exactly the same intellectual, statistical, and computational procedures available in every other branch of science. For these procedures to yield valuable scientific results, however, the clinician must also improve the scientific validity of the primary clinical data" (Feinstein, 1967).

In too many quarters this warning has been least heeded in psychiatry, where we have paid the price for self-indulgent complacency, the payment having been exacted in terms of an excessive preoccupation with the minutiae of symptomatology and with sterile arguments about classification which are reminiscent more of mediaeval schools of theology than of modern schools of medicine. On this topic academic pronouncements have been made in such terms as to recall Nietzsche's comment to Burckhardt that he "would very much prefer a professorial chair in Basle to being God." Challenges to such an attitude have, none the less, been proclaimed in the form of evidence from at least three sources, which make it clear that the clinical psychiatrist should be prepared to exercise more modesty than he has been wont to do in the past. Work in these three areas questions the traditional authority of the clinician in respect of his diagnostic competence, his therapeutic skills, and his familiarity with the full spectrum of clinical issues comprehended by his specialty.

Challenges to the Clinician

The first challenge comes from the careful scrutiny of the subjective nature of many of the data used in the classical descriptions of mental illness. Some of the fallacies inherent in an over-dependence on this category of information were exposed in the international study of observer variation carried out for the

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World Health Organization in the form of an experimental approach to psychiatric diagnosis (Shepherd *et al.*, 1968). The use of standardized case histories and videotaped interviews revealed disconcertingly large areas of disagreement between a group of experts from several countries, and showed clearly that there are marked variations in the observations and perceptions of the most experienced clinicians, in the clinical inferences drawn from clinical data, and in the classificatory schemata in use at the present time. It is becoming widely accepted that clinical psychiatry sorely lacks not only an acceptable schema of classification but also an accompanying glossary of terms, a task to which the World Health Organization is addressing itself at the present time.

The second challenge to the clinician arises from the field of experimental therapeutics. In every branch of medicine the pharmacologist and the medical statistician can now supplement, and often contradict, the authoritative pronouncements of clinical experience with expert knowledge of not only the principles of pharmacodynamics but also of experimental design. Nowhere is such expertise more essential than in psychiatry, where a paucity of objective indices renders measurement difficult and clinical impressions treacherous. The importance of this point of view has been amply demonstrated by the development of a peculiarly British contribution to clinical methodology—namely, the controlled clinical trial. This form of clinical experiment was largely developed in the 1930s by the Clinical Trials Committee of the Medical Research Council under the guidance of Professor Sir Austin Bradford Hill. Accordingly, when the M.R.C. extended its activities to cover mental disease some 10 years ago the evaluation of remedies for mental disorder may be said to have come of age. The possibilities of the method were well illustrated by the first study conducted under this aegis, a large-scale, multi-centred evaluation of four treatments of depressive illnesses—electric shock, two drugs, and a placebo—in which 250 patients were treated and followed up for six months by 55 psychiatrists working in 30 different hospitals (Medical Research Council Clinical Psychiatry Committee, 1965). The theoretical justification for so elaborate an investigation resides in the need to obtain and study a homogeneous cohort of patients much larger than an individual clinician, or group of clinicians, can reasonably hope to amass. In this instance the practical justification proved to reside in unexpected results which confounded clinical opinion about therapeutic response and efficacy of treatment.

The third challenge is posed by the application of epidemiological principles to the study of mental disorders. It is now apparent that hospital-based psychiatrists have generalized about these disorders from what the statistically minded critic would recognize as a grossly unrepresentative sample. For example, studies of mental illness in general practice in the United Kingdom have shown that the nature and distribution of psychiatric morbidity are very different from what is encountered in hospital practice and, still more to the point, that not more than one in twenty of these patients are referred to any form of hospital facility (Shepherd *et al.*, 1966). We are only now beginning to take cognizance of the full range of extramural mental illness as part of a deepening interest in community medicine. Further, the emphasis being placed on early discharge and community care has revealed that many of the phenomena of major mental disease have to be regarded as institutionally determined artifacts which can be modified by energetic intervention.

Cognate Disciplines

But while the formal application of the scientific method to the clinical data of psychiatry holds out great promise for the future, it is equally evident that, as with other branches of medicine, clinical research must also incorporate the concepts

and findings of cognate disciplines. For even so perceptive a clinician as Emil Kraepelin the disciplines in question were wholly identified with the biological sciences: "Clinical observation," he wrote, "must be supplemented by thorough examination of healthy and diseased brains, neurology, the study of heredity and degenerative diseases, the chemistry of metabolism and serology" (Kraepelin, 1962). The laboratory studies which established the neurosyphilitic basis of general paresis or the metabolic investigations of Gjessing on periodic catatonia can be accounted successful examples of research in this mould, but it is historically significant that even before Kraepelin expressed these views there had appeared the first group of the remarkable series of papers by Joseph Goldberger which were to demonstrate the dietary aetiology of pellagra and its associated psychiatric disorders by means of a purely epidemiological analysis (Terris, 1964). Nor is it entirely fanciful to assume, in the light of the clinical knowledge which had been amassed about general paresis by the second half of the nineteenth century, that an epidemiologist of Goldberger's ability could have established that syphilis was a necessary link in the aetiological chain long before Wassermann and Noguchi had clinched the case.

Clearly Kraepelin's list of the basic sciences relevant to psychiatry must be regarded as incomplete. The experience of the past 50 years has now confirmed that these sciences are broadly divisible into two large categories: the biological group, which includes neuroanatomy, neurophysiology, neuroendocrinology, ethology, neurochemistry, and pharmacology; and the psychosocial group, which includes psychology, sociology, anthropology, and demography. Psychology is a bridging discipline between these groups: on the one hand it extends into the indisputably non-biological areas of social and educational psychology; on the other hand, the techniques of modern neuropsychology are often closer to physiology than to psychology in the traditional sense. In general, the psychosocial sciences are concerned with the identification of factors bearing on the causal associations and natural history of mental diseases, and the biological sciences with the mechanisms and interactions of such factors. In this respect, of course, the subject does not differ essentially from general medicine, where the situation has been well described in the form of an extended metaphor: "Medicine," says Professor Merton, "is at heart a polygamist becoming wedded to as many of the sciences and practical arts as prove their worth . . . as is often the case with polygamy, the first set of wives—say, the biological and chemical sciences—are reluctant at first to approve yet another addition to the ménage. But there is still hope. As the burden of work plainly becomes more than can be managed by the present members of the household, they become ready for new accessions to help carry the load of what needs to be done" (Merton, 1957).

Dependence on Allied Sciences

The complexity of the network of scientific disciplines which may contribute to progress in psychiatry emerges from any survey of recent advances in knowledge. To mention, for example, no more than human genetics, the neurochemistry of inborn errors of metabolism, learning theory, or the development of the new psychotropic drugs is to indicate the dependence of modern psychiatry on a host of allied sciences. It follows that scientific research in the field of mental disorders must depend not only on the independent contributions of workers in a number of related disciplines but also on the interchange between such workers and clinicians. It therefore becomes imperative to provide the research-minded psychiatrist with easy access to other workers in related fields of research for a simple but good reason: "When psychiatrists are closely in touch with people conducting research in other medical or scientific fields, and are not isolated in groups wholly engaged

in clinical routine, and when they are men whose training and interests are of a kind to make them ready to consider new information and to see old information in a new light, the chances that a train of discovery will be fired are high" (Lewis, 1963). This point of view has been underwritten at my own institution, where a university hospital in which postgraduate clinical psychiatry is taught and practised is brought into close contact with several university departments and research units where active investigation into the basic sciences relevant to psychiatry is being prosecuted. This arrangement ensures a continuous and often fruitful interchange between clinicians and research workers, and, equally important, it helps provide the facilities which are necessary if young men of high calibre are to be attracted to psychiatry as a career.

Teaching and research are often interdependent, and the educational importance of research is reflected in the training programme which now leads up to the University of London's degree of Master of Philosophy in Psychiatry, the specialist examination for which our trainees prepare themselves. This examination is normally taken after at least three years' specified instruction and is held in two parts: the first covers neurobiology, psychology, sociology, and genetics; the second embraces clinical psychiatry and clinical neurology. In addition, however, the candidate is also required to undertake a piece of original work under supervision, and for this purpose he is able to call on the skills of the specialized research workers within the Institute. Thus throughout his training period the graduate student is exposed to the notion of the "research ideal," which plays a large part in directing his interests and energies towards investigative work at a later stage of his career.

The M.R.C. Programme

While many of these younger workers will find a niche within existing university departments, others will look towards the Medical Research Council—whether it be to the National Institute for Medical Research, to the new Clinical Research Centre, or to the Council's research units, many of which are also attached to universities where the unit director occupies an academic position. At the present time the M.R.C. supports several units which are directly concerned with psychiatry. Some notion of their variety may be derived from their titles: The Social Psychiatry Unit, the Clinical Psychiatry Unit, the Neuropsychiatry Unit, the Unit for Epidemiological Studies in Psychiatric Illness, the Brain Metabolism Unit, the Unit for the Study of Environmental Factors in Mental and Physical Illness, the Neuropharmacology Unit, the Psychiatric Genetics Unit, and the Unit for Metabolic Studies in Psychiatry. Other units may also touch on psychiatric problems as part of their research programme; examples include the Neuroendocrinology Unit, the Developmental Psychology Unit, and the Unit on Neural Mechanisms of Behaviour. There are also M.R.C. groups, established to help establish a research programme within a university department on the understanding that it be integrated into the department at the end of an agreed period of tenure, which include such aggregates as the Cerebral Functions Research Group and the Research Group in Applied Neurobiology. In addition, there are numerous individual grants to help gifted investigators develop their talents.

To give a detailed account of the programmes covered by the Council's units is not possible within this compass, but their diversity and scope can be illustrated by referring to the

topics covered by two widely contrasting fields of inquiry. The Neuropharmacology Unit, for example, defines its objectives as "... studying the actions of drugs on the central nervous system, with particular reference to the correlation between electrophysiological and behavioural effects and to interactions with sensory stimuli, and also the sites of action of drugs in the brain, particularly in relation to synaptic transmission. The drugs studied are those with known effects on mental function and also substances that may be important as neurohormonal agents" (Medical Research Council, 1968a). At another extreme the Social Psychiatry Unit studies "... the influence of social factors on the occurrence, continuance, and outcome of mental illness and mental subnormality. Special attention is given to the measurement and classification of social and clinical abnormalities and to the evaluation of the effects of social methods of treatment" (Medical Research Council, 1968b). It is of further interest that of the 22 research workers listed as belonging to these two units only one-third are medically qualified. Indeed, it has been estimated that research is the primary activity of no more than about 40 psychiatrists in the whole country (Vickers, 1968).

With so much to do and so few people available it would seem reasonable to assume that any large-scale programme of psychiatric research will take some time to develop. This being the case, the problem of priorities must inevitably arise, and so it is of some interest to recall that five years ago a W.H.O. Scientific Group in Mental Health Research not only surveyed research needs but estimated their relative priority for W.H.O. action. Naturally the aims of an international body must differ in many respects from those of any national group, but the considered opinion of a group of experts must carry some weight in considering research strategy. In descending order of priority the listed topics were (1) epidemiology and social psychiatry; (2) the study of cultural and environmental factors; (3) the genetics of mental disorder; (4) mental retardation; (5) studies of childhood development; (6) geriatric psychiatry; (7) the application of learning theory; (8) biological psychiatry; (9) psychosomatic disorders; (10) psychotherapy; (11) alcoholism and drug abuse; (12) industrial psychiatry; and (13) forensic psychiatry.

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